Gopal Pettigadi

Process Engineer in Technical Service Department

I am passionate about bridging the gap between R&D and commercial operations within the Technical Services department to drive operational excellence. With 14 years of deep expertise in API manufacturing, I specialize in successful technology transfer, seamless scale-up, and robust DMF filing for new molecules and optimizing shop-floor metrics—specifically through solvent loss minimization, yield and productivity improvement via capacity enhancement, and the rapid troubleshooting of critical quality constraints to ensure global regulatory compliance.

CAREER OBJECTIVE

To be a part of the challenging team which strives for the better growth of the organization, explores my potential and provides the opportunity for enhancing my talent and to be an asset to the organization.

EDUCATION

B.Tech. in **Chemical Engineering** from Chaitanya Bharati Institute of Technology, Osmania University, Hyderabad.

CONTACT

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SOFTWARE SKILLS

Microsoft Excel, Word & Powerpoint

PERSONAL DETAILS

Father's Name: P. Narsimlu

Date of Birth : 6th July 1991

Gender : Male

Marital Status : Married

Languages : English, Hindi & Telugu

Notice Period : 3 Months

EXPERIENCE

Head the plant-level Technical Services function, steering a core team of 6 engineers in executing plant capacity expansions, solvent recovery initiatives, and process engineering optimizations that drive manufacturing reliability and cost reductions.

- **Asst. Manager,** Technical Service Department **"MSN Life Sciences Pvt. Limited"**, MSNLS-III, Bhiknoor**.**
  May 2019 – Till Date (7+ Years)
- **Executive,** Technical Service Department **"Aurobindo Pharma Limited", Unit-V,** Pashamailaram, Hyderabad.
  May 2017 - April 2019 (2 Years)
- **Sr.Team Member-** New Product Management Dpt. **"Dr. Reddy's Laboratories Limited."** Bollaram, Hyderabad
  September 2015 – April 2017 (1.6 Years)
- **Engineer**, Technical Service Department **"Hetero Labs Ltd."**, Unit-I, IDA, Jinnaram, Hyderabad.
  July 2012 - September 2015 (3.2 Years)

Achievements

- RM Cost reduced in API product through recovery of TEA from TEA Salt. savings 50.0 Lacs Annually
- Solvent loss minimization during centrifuge by installing the vent condensers & centrifuge nitrogen blanketing systems
- Palladium content reduction in key product by proposing the suitable metal scavenger & followed by reaction time reducing by adding the extra blade in reactor agitator. ~ savings 2.0Cr annually
- Played a key role in providing cost-effective solutions & optimizing the Batch Cycle Time by ensuring the CPPs & increased the capacity: 1) Amoxicillin TH product from 72TPM to 108TPM. 2) Sulbactam sodium from 2.2 TPM to 3.0 TPM, 3) PVMC from 9.1 TPA to 16.7TPA
- Handling OPEX projects related to solvents & yields improvement. i.e. achieving targeted yields for pre-defined products, Solvent Recovery % improvement, Fresh solvent reduction, Recovery of solvent from process waste(effluent)
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JOB RESPONSIBILITIES:

1. PROCESS EXCELLENCE & CONTINUOUS IMPROVEMENT (OPEX)

- **Solvent Management & Recovery:** Work on the solvent losses minimization in production blocks. Periodically monitor and review Solvent Recovery System (SRS) operations, occupancy, and recovery percentages. Propose new processes for recovery improvement, and evaluate solvent-wise material balances to reduce fresh solvent consumption.
- **Cycle Time Reduction:** Identify bottleneck operations to evaluate and reduce batch cycle times. Focus on time cycle reduction for unit operations like distillation, filtration, and drying through process modifications.
- **Yield & Productivity Optimization:** Drive process improvement activities including yields and productivity enhancement. Ensure budgeted yields are achieved and improved upon, and reduce process delay steps and yield losses.
- **Plant Capacity Release:** Governed site-level productivity improvement roadmaps across multi-product API lines; combined process intensification strategies and heat-exchanger modifications to deliver expansion and release in total plant asset capacity (measured via Total KL Days).

2. TECHNOLOGY TRANSFER & SCALE-UP

- **Technology Absorption:** Absorb technology from the R&D team to develop projects and extend batch monitoring support for successful plant execution.
- **Data Generation:** Generate scale-up data in the lab, including engineering parameters such as mixing calculations, rates of filtration, rates of heating/cooling, distillation times and utility calculations.
- **Scale-Up Operations:** Scale up newly developed APIs and intermediates from small-scale/lab/pilot scale to plant and commercial scale.
- **Documentation & Review:** Review tech packs and engineering calculations while preparing process engineering documents like justification for selection of equipment etc.
- **Cross-Functional Liaison:** Coordinate with R&D, manufacturing, and Quality Assurance (QA) for conducting validation batches and DMF filings. Raise scale-up concerns regarding process or chemistry to group leaders during demonstrations or prior to scale-up.

3. TECHNICAL SERVICES & TROUBLESHOOTING

- **Equipment & Product Mapping:** Performed facility identification, circuit mapping, and equipment suitability assessments to de-clash product matrices
- **Troubleshooting:** Troubleshoot existing plant processes, daily production activities, and equipment

issues to maintain desired yields, quality, and smooth plant operations.

- **Deviation Investigations:** Led root-cause investigations for product failures, deviations, Out of Specification (OOS), and Out of Trend (OOT) results to establish robust CAPAs.
- **Crystallization Monitoring:** Studied and monitored crystallization operations to achieve targeted polymorphs, particle size distribution, and eliminate process abnormalities

4. PROJECTS & CAPITAL EXPENDITURE (CAPEX)

- **Engineering Design:** Prepare Process Flow Diagrams (PFD), Piping and Instrumentation Diagrams (P&ID), and process data sheets for new or modified process equipment (reactors, filters, dryers, storage tanks).
- **Equipment Selection & Sizing:** Select and size process equipment using calculations like power per unit volume, tip speed, and agitator power consumption. Prepare User Requirement Specifications (URS) & Design Data Sheets.
- **Utility Infrastructure Sizing:** Estimate utility consumption and size major infrastructure such as cooling towers, chilled water plants, brine plants, steam boilers, and utility header lines.
- **Erection & Commissioning:** Handle the erection, pre-commissioning, and commissioning of new process equipment, production blocks and solvent recovery systems.

5. PROCESS SAFETY:

- **Hazard Assessments:** Led Process Hazard Analysis (PHA) or HAZOP studies, Quantitative Risk Assessments (QRA) and Pre-Start Safety Reviews (PSSR) with cross-functional teams to implement necessary mitigation measures.

- **Safety Data Evaluation:** Evaluated reaction and powder safety data (RC1, DSC, MIE) to design and execute necessary risk mitigation controls.

DECLARATION:

I hereby declare that the above furnished information is true and correct to the best of my knowledge and belief**.**

Your’s Sincerely

P. Gopal